

ABSTRACT OF THE DISCLOSURE

To optimize the performance of DSL modems in the same cable bundle, the size and position of the bandwidth used for transmission is intelligently selected when the bit rate necessary for making the transmission is less than the total available bandwidth. By intelligently selecting a minimum number of subcarriers for Digital Multi-tone (DMT) signal transmission, a reduction in line driver power consumption is effectuated. Additionally, by intelligently selecting the position of the used bandwidth within the total available bandwidth, near-end crosstalk (NEXT) noise within the cable bundle may be minimized.